

## SPECIES AT RISK

### What does the indicator tell us?

**T**his indicator shows the percentage of species dependent on freshwater aquatic or wetland habitats that are at risk. Currently, the groups of animals at greatest risk overall are those dependent on aquatic systems. More than 60 percent of freshwater mussels and crayfish are at risk, the highest imperilment ratio documented for any group of plants and animals in the United States.

### How will the indicator be used to track progress?

**A**n important part of assessing the biological diversity and integrity in a waterbody is determining whether the aquatic species that should naturally exist in the waters are actually there and at the expected population size.

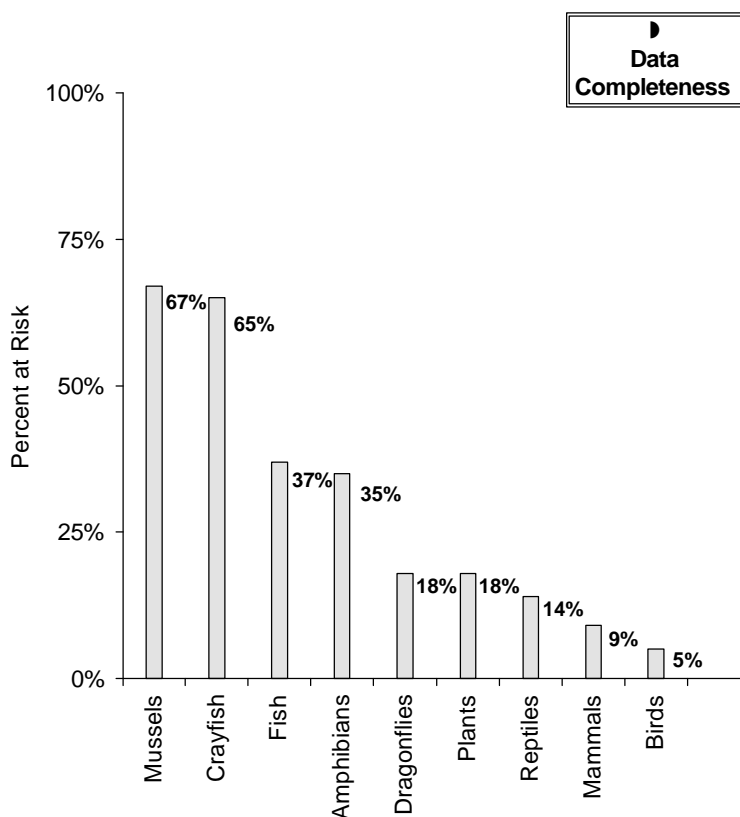
This indicator uses data from The Nature Conservancy and the Network of State Natural Heritage Data Centers, a public-private network of biological inventory and assessment programs. The biological and conservation status of species are assessed, and the species are ranked by the state agency-based Heritage Network as extinct, critically imperiled, imperiled, vulnerable, apparently secure, or demonstrably secure. Criteria for ranking a given species include the number of populations or occurrences known and their health, the estimated number of individuals, the distributional range and extent of appropriate habitat, the population and range trends, threats, and fragility or susceptibility to these threats.

Approximately 30,000 U.S. species have been assessed and ranked, and rankings are updated as new information becomes available.

### What is being done to improve the indicator?

**T**hese conservation status ranks are not legal categories, as are the U.S. Fish and Wildlife Service (USFWS) listings of threatened and

### INDICATOR 8: Aquatic and Wetland Species at Risk



Source: The Nature Conservancy and State Natural Heritage Data Centers, 1996

endangered species. These status ranks focus on known biological factors, with any individual status rank considered a hypothesis based on the best available information. Thus, ranks are less precise for species with less current inventory information.

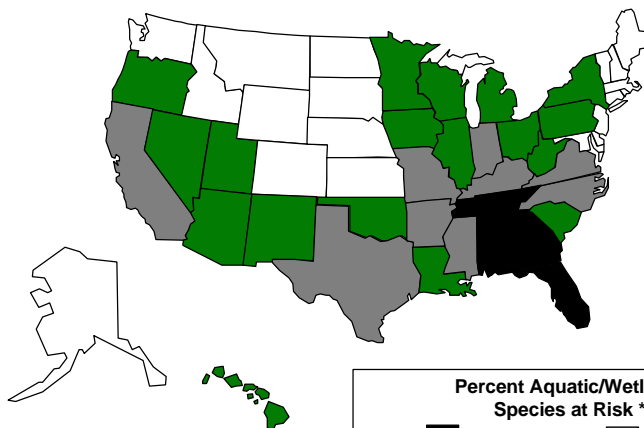
To improve the confidence and accuracy of the ranks, additional inventory efforts are needed. The indicator will also need to distinguish between those species that are naturally rare and those that are imperiled because of human induced threats. Improvements to the National Wetlands Inventory, which provides information on wetland use by plants, and to the Natural Heritage Network, which covers habitat use generally, will result in a more complete list of wetland species and animal species habitat information.

Although trend information, where available, is incorporated into the assessment of these conservation status ranks, the indicator cannot currently show specific trends. The indicator does not distinguish between those species that have stable or increasing populations and those that have declining populations. To allow the indicator to better differentiate between cause of imperilment and population trends, additional research is needed to carry out a trend monitoring strategy. EPA, The Nature Conservancy, and USFWS are working together to better integrate multiple data to support development of a second part to this indicator that will focus on trends.

### What is being done to improve conditions measured by the indicator?

**D**egraded water quality and altered water flow are considered two of the primary threats affecting aquatic organisms and leading to these dramatic levels of imperilment.

#### Aquatic Species at Risk by State



Source: The Nature Conservancy and State Natural Heritage Data Centers, 1996

#### Percent Aquatic/Wetland Species at Risk \*



\* Includes species of mussels, crayfish, fishes, amphibians, reptiles, mammals, and birds

Any effort to prevent, control, or clean up water pollution or maintain or restore natural flow regimes should contribute to a decrease in species at risk by providing those species with a clean and safe habitat. More specifically, there are various programs that target species at risk for protection. Many of the species identified as at risk by The Nature Conservancy and Natural Heritage Network are also listed as threatened or endangered by USFWS. Listing a species as threatened or endangered guarantees that it will receive special protection.

The Nature Conservancy itself works to protect species at risk by determining which species are truly vulnerable and where they exist, and by working with partners to acquire or manage lands and waters harboring these rarities, as well as representative examples of ecological communities.

#### For More Information:

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